REMARKS

Reconsideration and allowance of the captioned patent application are respectfully requested.

Claims 1-19 and 24-26 were pending in this application. The Examiner deemed claims 4-7, 11-16, 25 and 26 to be withdrawn from consideration in view of the restriction requirement dated November 12, 2008, which was made final in the Official Action dated February 4, 2009.

Applicants have cancelled all pending claims, and have presented new claims 27-39 in response to the restriction requirement. Since the restriction requirement is considered a determination that all subject matter outside of the group defined by the Examiner is considered patentably distinct, the genus and subgenuses have been modified to read on the elected group. This is with the understanding that the deleted subject matter can be prosecuted by filing additional (divisional or continuation) applications as appropriate. No new matter has been improperly added in this amendment.

The Examiner objected to the specification and rejected the claims for non-enablement under 35 U.S.C. 112 first paragraph. The Examiner's indication that the specification is enabling for compounds in which ring A is a pyridine and R^1 (or R^{12}) represents phenyl, pyridine or pyrrole is appreciatively acknowledged. However, Applicants respectfully traverse the objection based upon the allegation that the specification is non-enabling for compounds in which ring A is other than pyridyl, and compounds in which R^1 (or R^{12}) is other than a phenyl, pyridyl or pyrrolyl group.

The claimed scope for ring A is a member selected from a list of 5-6 membered heteroaryl groups. Support for this change is found throughout the specification, and in particular, at page 24, lines 5-20. Working examples for the various A rings are found at pages 78-287. Based upon the foregoing, Applicants respectfully urge that the enablement burden has been met.

With regard to R^1, R^{11} and R^{12}, Applicants urge that the enablement burden has been met as well. R^1 is generally defined as aryl, or a 4-10 membered mono or bicyclic heterocycle. Examples are recited in the specification at page 16, line 15 through page 17, line 2. Examples of R^1-X_5 are recited on page 21, line 19 through page 24, line 24.

Examples of R^{11}-X_{51} are recited on page 26, at line 20 through page 27, line 23.

Examples of R^{12} are recited on page 28, at lien 22 through line 29. Examples of R^{12} as a 4-7 membered ring are found at page 29, line 12, through page 31, line 8. Further examples of R^{11}-X_{51} are provided on page 32, lines 8-16, page 32, lines 26 through page 34, line 14.

Examples of compounds and the glucokinase activating activity embodied therein can be found on page 76, Table 5, which demonstrates that the compounds are potent GK activators.

Based upon the foregoing, the enablement burden has been fully met. Assessment of enablement must take into account the point of view of the skilled chemist, and from this perspective, one of ordinary skill is more than able to make and use the compounds that are claimed.

The Examiner also alleged that the specification does not enable the full breadth of the claims, and that there is no teaching as to how to make and use compounds bearing highly reactive groups. Applicants respectfully disagree, since this does not analyze the subject from the perspective of one of skill in the chemical art. A PhD chemist is more than able to protect reactive groups during the organic synthesis, without resorting to undue experimentation. This is the heart and soul of organic synthesis, and is more than adequately described in the specification.

With respect to the working examples, Applicants have provided almost 300 pages of guidance, which includes 603 examples. Applicants are not required to provide any biological data at all, if it is not necessary to enable someone or ordinary skill to make and use the compounds. Here, they have provided representative datee that shows efficacy. No more that that is required. If the Examiner determines that this rejection should be maintained, she is requested to identify such reactive groups with particularity, and to explain why she believes that protecting that particular group during synthesis would not be enabled and within the level of ordinary skill. Otherwise, this rejection should be deemed overcome.

The claims were further rejected for lack of adequate written description, as set forth with particularity in the Office Action in numbered paragraphs 6 through 12.

Applicants respectfully disagree specifically with the comments recited in paragraph 7. The specification clearly addresses compounds of formula I in which $(R^1\text{-}X_5)_2$ means these substituents can be the same or different, contrary to the Examiner's interpretation.

The Examiner's comment in numbered paragraph 8 is respectfully traversed. R^4 is a substituent on R^1, which can be among other groups, a $C_{1\text{-}6}$ alkyl group. This $C_{1\text{-}6}$ alkyl group is optionally substituted with 1-3 hydroxyl, halo, $OC(O)C_{1\text{-}6}$ alkyl or $OC_{1\text{-}6}$ alkyl groups. The $OC(O)C_{1\text{-}6}$ alkyl group is further optionally substituted with 1-3 halo atoms. This is clearly recited on page 4, lines 21-23, and on page 17, at lines 6-8.

The Examiner's comments in paragraphs 9-12 have been addressed in the claims newly presented.

The Examiner further rejected the claims for obviousness over U.S. Patent No. 7,064, 215 B2 (the '215 patent). Applicants respectfully traverse.

The compounds of the '215 patent, as the Examiner has observed, do not include a second substituent ring or bicyclic moiety attached to the benzimidazole group. Additionally, the compounds of the '215 patent are not disclosed as being glucokinase activators. Instead the compounds are alleged to be useful for interacting with Receptor Tyrosine Kinases (RTKs) that regulate development of cell growth, differentiation, remodeling and adult tissue regeneration. Glycogen synthase kinase 3 (GSK3) is alleged to be implicated in the inhibition of glycogen synthase (Col. 2, line 64 through Col. 5, line 35), which is further alleged to be useful for the treatment of numerous diseases (type 2 diabetes, Alzheimer's, Huntingdon's, Parkinson's, AIDS associated dementia, ALS, and MS. The compounds of the '215 patent are not alleged to be useful for activating the glucokinase enzyme, as in the presently claimed invention. Hence there are significant surprising differences between the present invention and the compounds disclosed in the '215 patent, both structurally (no second ring substituent attached to the benzimidazole) and in the properties embodied in the compounds.

Nothing within the '215 patent would have taught or suggested to the ordinary chemist to add a second ring substituent group to the benzimidazole core, or that by making this change, glucokinase activating activity can or would be achieved. Since the invention as a whole includes

the chemical structure and the properties embodied in the compounds, the invention as a whole is not obvious in view of the '215 patent.

The Examiner also raised an obviousness-type double patenting objection over three co-pending applications that are commonly owned. The Examiner is requested to hold this objection in abeyance until the other issues have been adequately addressed.

Based on the foregoing, it is urged that the captioned patent application is in condition for allowance. Such action is respectfully requested. If the Examiner has any questions, she is respectfully requested to telephone the undersigned.

Respectfully submitted,

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